

STATE OF SOUTH CAROLINA
BEFORE THE PUBLIC SERVICE COMMISSION
DOCKET NO. 2015-55-E

In Re: Application of Duke Energy
Carolinas, LLC to Establish a
Distributed Energy Resource
Program

)
)
) DIRECT TESTIMONY OF
) HAMILTON DAVIS ON BEHALF OF
) SOUTH CAROLINA COASTAL
) CONSERVATION LEAGUE AND
) SOUTHERN ALLIANCE FOR CLEAN
) ENERGY
)
)
)

1 **Q. MR. DAVIS, PLEASE STATE YOUR NAME, POSITION, AND BUSINESS**
2 **ADDRESS.**

3 A. My name is Hamilton Davis. I am the Energy Program for the South Carolina
4 Coastal Conservation League (“CCL”), and my business address is 328 East Bay
5 Street, Charleston, SC 29401.

6 **Q. PLEASE STATE BRIEFLY YOUR EDUCATION, BACKGROUND AND**
7 **EXPERIENCE.**

8 A. I have a Bachelor of Science degree from Clemson University and a Juris Doctor
9 degree from the University of South Carolina School of Law. I joined CCL in
10 2006 and have directed the Energy and Climate program since 2009. I oversee all
11 of CCL’s energy-related policy and regulatory work at the local, state, and federal
12 level. I currently serve on a number of boards and committees, including the
13 Energy Advisory Council for the S.C. Public Utility Review Committee, the S.C.

1 Energy Office Advisory Committee, and the S.C. Regulatory Task Force for
2 Coastal Clean Energy. I am a recent board member of the South Carolina Solar
3 Business Alliance, and I have previously served on the S.C. Offshore Oil & Gas
4 Legislative Study Committee, the S.C. Offshore Wind Legislative Study
5 Committee, and the S.C. Shoreline Change Advisory Committee. A copy of my
6 resume is attached as Davis Exhibit 1.

7 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE COMMISSION?**

8 A. Yes, I testified before the Commission in Docket No. 2013-392-E, Duke Energy
9 Carolinas, LLC and North Carolina Electric Membership Corporation's Joint
10 Application for a Certificate of Environmental Compatibility and Public
11 Convenience and Necessity for the Construction and Operation of a 750MW
12 Combined Generating Plant near Anderson, SC. I have also previously appeared
13 before the Commission in a 2012 allowable ex parte briefing on South Carolina
14 Electric & Gas Company's integrated resource plan.

15 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS CASE?**

16 A. I am testifying on behalf of CCL and Southern Alliance for Clean Energy
17 ("SACE").

18 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

19 A. On February 9, 2015, Duke Energy Carolinas, LLC ("DEC") filed an application
20 to establish distributed energy resource programs under Act 236, the South
21 Carolina Distributed Energy Resources Program Act ("the Act"). DEC filed
22 direct testimony in support of its application on March 17, 2015.

1 The purpose of my testimony is to make several recommendations to the
2 Commission and DEC in response to the filed application and testimony. These
3 recommendations are meant to improve the Distributed Energy Resource
4 ("DER") programs proposed by DEC.

5 **Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS TO THE**
6 **COMMISSION.**

7 A. DEC is to be commended for choosing to opt into DER programs that will bring
8 more renewable power to South Carolinians. While we support DEC's program
9 overall, we propose several changes to bring the program into better compliance
10 with Act 236 and to make DER cost-effective to more customers. First, I
11 recommend that DEC's proposed 1 megawatt ("MW") shared solar facilities be
12 counted towards the appropriate Act 236 target, which is expressed in the
13 nameplate capacity of the facilities. Second, I recommend that DEC consider
14 changes to the proposed programs and future DER incentive programs to make
15 distributed generation accessible to more potential participants, regardless of
16 income level. Third, I suggest changes to the program modification process
17 proposed by DEC to provide greater transparency and consistency. Fourth, I
18 recommend that DEC consider implementing a step-down approach to incentive
19 levels that potential program participants can rely on when making investment
20 decisions. Finally, I recommend establishing a transparent and appropriate plan
21 for Renewable Energy Credits, which DEC proposes to retain.

22 **Q. HOW IS THE REST OF YOUR TESTIMONY ORGANIZED?**

1 A. The rest of my testimony is organized in order of the recommendations made
2 above: 1) Shared Solar Program, 2) Access to DER Incentives, 3) Program
3 Modification Procedures, 4) Step-Down Incentive Approach, and 5) Renewable
4 Energy Credits.

5
6 **Shared Solar Program**

7 **Q. PLEASE BRIEFLY DESCRIBE DEC’S PROPOSED SHARED SOLAR**
8 **PROGRAM.**

9 A. DEC has proposed a shared solar program in its DER application that will allow
10 multiple retail customers to subscribe to portions of ground-mounted solar
11 facilities, each with a nameplate capacity of 1 megawatt (1 MW), located
12 throughout DEC’s service territory. Subscribing customers will receive credit for
13 electricity generated by their share of the project on their utility bill. To
14 participate in the shared solar program, retail customers will pay an application
15 fee, initial subscription charge, and a monthly subscription charge.¹

16 **Q. HOW DOES DEC PROPOSE COUNTING SHARED SOLAR TOWARDS**
17 **ACT 236 REQUIREMENTS?**

18 A. DEC has proposed to use shared solar subscriptions to meet Act 236’s
19 requirement that it incentivize customers to purchase or lease facilities “each”
20 with a “nameplate capacity” no greater than 20 kilowatts (kW).²

¹ Verified Application of Duke Energy Carolinas, LLC to Establish a Distributed Energy Resource Program, 9-11 and Exhibit B (Feb. 9, 2015), PSCSC Docket No. 2015-55-E.

² This approach is described in DEC Witness Emily O. Felt’s testimony at page 9.

1 **Q. DO YOU HAVE ANY CONCERNS WITH THIS APPROACH?**

2 A. Yes. Shared solar facilities that are 1 MW in nameplate capacity should not be
3 used to meet Act 236's requirement that DEC incentivize customers to lease or
4 purchase renewable energy facilities no greater than 20 kW in nameplate capacity.

5 **Q. CAN YOU ELABORATE?**

6 A. Act 236 requires that a participating utility's DER programs result in a minimum
7 distributed generation capacity by 2021 of two percent of the previous five-year
8 average of the utility's South Carolina retail peak demand.³ This two percent is
9 divided equally into a utility-scale requirement (1-10 MW systems) and a
10 customer-scale requirement (no greater than 1 MW in nameplate capacity). There
11 is an additional carve-out within this latter customer-scale 1% requirement: a
12 quarter of it, or 0.25% of the utility's retail South Carolina five-year average peak
13 demand, must come from "renewable energy facilities each no greater than twenty
14 kilowatts (20 kW AC) in nameplate capacity."⁴ All of these thresholds are based
15 on the facilities' nameplate capacity, which generally refers to the maximum rated
16 output of the power facility. A shared solar subscription as proposed by DEC
17 would be for a portion of a facility's output, and would allow power from
18 facilities larger than 20 kW AC to count towards the 20 kW AC requirement.⁵

³ S.C. Code Ann. Section 58-39-130(C).

⁴ S.C. Code Ann. Section 58-39-130(C)(2).

⁵ Verified Application of Duke Energy Carolinas, LLC to Establish a Distributed Energy Resource Program, 9-11 and Exhibit B (Feb. 9, 2015), PSCSC Docket No. 2015-55-E; Direct Testimony of DEC Witness Emily O. Felt, at p. 9.

1 We fully support shared solar as a valuable DER program component
2 because it provides customers the ability to invest in solar even when they cannot
3 install it on their own property. However, the shared solar program should be
4 incentivized and developed alongside—and not instead of—incentives for rooftop
5 or other smaller systems below 20 kW. This is consistent with the goal of the
6 South Carolina Distributed Energy Resource Act to incentivize a reliable,
7 efficient, and *diversified* portfolio of distributed energy resources.⁶ The explicit
8 0.25% requirement for distributed generation resources no greater than 20 kW
9 contributes to this goal because it guarantees that a certain amount of distributed
10 resources will be built on a smaller scale. For solar, the under-20 kW size is
11 typical for residential or small commercial rooftop systems, in contrast to the
12 shared solar systems which will be much larger, ground-mounted, and not located
13 on a customer's own property.

14 **Q. DO YOU HAVE ANY OTHER RECOMMENDATIONS FOR**
15 **IMPROVING THE SHARED SOLAR PROGRAM?**

16 A. Yes. I also recommend that DEC allow longer term shared solar subscriptions,
17 allow subscriptions to be both portable and transferable, and consider siting
18 shared solar projects in communities that will benefit from them.

19 **Q. CAN YOU ELABORATE ON THE SUBSCRIPTION TERM**
20 **RECOMMENDATION?**

⁶ S.C. Code Ann. Section 58-39-110.

1 A. Yes. DEC has proposed a maximum shared solar subscription term of ten years
2 in its DER program application.⁷ Since solar systems are a long term investment
3 with fixed upfront costs, investing in solar can give customers the ability to
4 stabilize their energy costs over time. Customers who subscribe to the shared
5 solar program should have the option to make longer term investments of at least
6 twenty years. Twenty years is the low end of solar systems' projected lifespan
7 and allowing for the option of longer subscriptions will ensure that participants
8 obtain the benefit of hedging against future bill increases over time due to fossil
9 fuel price volatility. As an example of another program that has longer term
10 subscriptions, the Orlando Utilities Commission ("OUC"), a municipal utility in
11 Florida, offers 25-year subscription rates at pre-set prices for electricity generated
12 from its community solar program, allowing customers to see savings as
13 electricity rates increase.⁸ OUC's community solar subscriptions require an
14 initial customer commitment of two years with a \$50.00 deposit that is credited
15 back to the customer's account after the first two years. Participation follows a
16 customer if they move within the service territory, and if a customer moves away
17 from the service territory within the first two years, their only loss is the initial
18 \$50.00 deposit.

19 **Q. CAN YOU DESCRIBE THE RECOMMENDATION THAT**
20 **SUBSCRIPTIONS BE PORTABLE AND TRANSFERABLE?**

⁷ Verified Application of Duke Energy Carolinas, LLC to Establish a Distributed Energy Resource Program, Exhibit B (Feb. 9, 2015), PSCSC Docket No. 2015-55-E.

⁸ Orlando Utilities Commission, Community Solar (2015), <http://www.ouc.com/environment-community/solar/community-solar>.

1 A. DEC has proposed that if a shared solar subscriber moves to another location
2 within DEC's South Carolina territory, they will be able to remain subscribed at
3 the new location.⁹ This portability will benefit subscribers and is one of the
4 advantages of a shared solar program. DEC should also consider ways to avoid
5 overly penalizing subscribers who move out of DEC's South Carolina territory
6 before their subscription term expires, such as making subscriptions transferable.
7 In its application, DEC proposes that if a customer discontinues service and
8 moves out of the DEC South Carolina service territory, the customer will no
9 longer be subscribed to the program and would need to reapply in the future to
10 participate again.¹⁰ Under DEC's current proposal, it appears that the customer
11 who moves out of DEC's territory would forfeit not only the \$20.00 application
12 fee, but also the \$100.00 per kW of subscribed solar capacity initial subscription
13 charge. DEC should consider making the shared solar subscriptions transferable
14 back to DEC or to another customer within DEC's South Carolina territory, so
15 that the loss to participants is not overly punitive and does not discourage
16 participation.

17 **Q. CAN YOU ELABORATE ON THE SHARED SOLAR SITING**
18 **RECOMMENDATION?**

19 A. Shared solar allows the siting of projects within communities that will benefit
20 from them. This can increase customer awareness of the program and the sense

⁹ Verified Application of Duke Energy Carolinas, LLC to Establish a Distributed Energy Resource Program, Exhibit B (Feb. 9, 2015), PSCSC Docket No. 2015-55-E.

¹⁰ *Id.*

1 of direct relationship between participation in the shared solar program and
2 contributing to local clean energy generation. It may also be feasible for projects
3 to be sited on brownfields and other locations where communities have
4 shouldered historic burdens from traditional energy production. DEC should take
5 into account these siting considerations when issuing its request for proposals for
6 shared solar facilities and when deciding which offers to accept.

7 **Q. CAN YOU SUMMARIZE YOUR RECOMMENDATIONS TO IMPROVE**
8 **DEC'S PROPOSED SHARED SOLAR PROGRAM?**

9 A. Yes, I have recommended the following:

- 10 • The proposed 1 MW shared solar facilities should not take the place of
11 DEC's obligation to incentivize customers to purchase or lease
12 renewable energy facilities no greater than 20 kW in nameplate
13 capacity. The shared solar proposal is a valuable aspect of the
14 proposed DER program and should be developed in conjunction with
15 incentives sufficient to meet the requirement to incent systems with
16 nameplate capacity below 20 kW AC.
- 17 • DEC should offer shared solar subscriptions for longer than ten year
18 terms. Allowing the option of twenty year subscriptions would result
19 in greater ability of customers to hedge against future bill increases
20 over time due to fossil fuel price volatility.
- 21 • DEC should make shared solar subscriptions both portable and
22 transferable.

- DEC should consider siting shared solar projects in or near communities that will benefit from the projects and should consider opportunities to site these projects on brownfields or other locations not suitable for other purposes.
- Later in my testimony, I also recommend that DEC allow for its initial subscription charge to be paid up-front or over the length of the subscription term.

Access to DER Incentives

Q. WHAT RECOMMENDATIONS DO YOU HAVE REGARDING ACCESS TO DER INCENTIVE PROGRAMS, INCLUDING THE SHARED SOLAR PROGRAM?

A. The DER incentive programs provide an opportunity to bring the benefits of affordable, clean energy to more South Carolinians than ever before. Solar power can help families stabilize their energy costs and invest in renewable, pollution-free resources that make their communities healthier, cleaner and more resilient. Since lower income families on average pay a greater percentage of their income to utility bills compared to higher-wage earners, these customers stand to benefit the most from affordable solar power, allowing the savings from solar to go towards other important necessities.

Despite recent declines in the cost of solar technology, the upfront capital costs can still be a barrier for many residential customers who want to participate,

1 particularly those with lower and fixed incomes. DEC's application and proposed
2 incentives address this issue to some extent. For example, DEC's rebate incentive
3 for rooftop solar will help to offset the upfront cost of installing solar.

4 Additionally, DEC's shared solar program will give interested residential
5 customers another way to participate in the programs even if they are not able to
6 install solar at their homes. That said, there are additional steps DEC can take to
7 ensure that all South Carolinians are afforded meaningful access to its DER
8 incentive programs, including those with lower incomes.

9 **Q. WHAT SPECIFIC RECOMMENDATIONS DO YOU HAVE TO**
10 **IMPROVE THE PROGRAMS AS PROPOSED?**

11 A. DEC should consider creating a program carve-out under both the rooftop rebate
12 and the shared solar programs for lower income participants. I also recommend
13 that DEC evaluate whether the \$1 per watt rebate and the proposed shared solar
14 costs and credits will be sufficient to incentivize lower income customers to
15 participate. If the answer is no, DEC should modify the program so that all
16 potential participants are sufficiently incentivized. Finally, for DEC's proposed
17 shared solar program, I recommend allowing participants the option to pay the
18 initial subscription charge over time, in addition to the option of paying it up
19 front.

20 **Q. WHAT IS THE BASIS FOR RECOMMENDING A CARVE-OUT FOR**
21 **LOWER INCOME PARTICIPANTS?**

1 A. This has been done in other states with DER incentive programs. For example,
2 California's Solar Initiative ("CSI") included a carve-out of at least 10% of CSI's
3 funds to support solar installation on low-income housing between 2007 and
4 2016. The program has now been extended until 2021, and the carve-out has
5 contributed to solar installations on over 3,300 eligible single-family homes. The
6 California program used a household income threshold of 80% or below the area
7 median income and required that the participants lived in affordable housing as
8 defined under state law. Similarly, the state of Colorado recently enacted the
9 Community Solar Gardens Act, which requires that a certain percentage of shared
10 solar gardens be reserved for low income residents.¹¹ DEC should build on these
11 examples and include a carve-out of both the rebate funds and the shared solar
12 project capacity that is reserved for participants with lower incomes, and should
13 offer higher incentive rates as needed to allow for their participation.

14 **Q. CAN YOU ELABORATE ON YOUR RECOMMENDATION FOR THE**
15 **SHARED SOLAR SUBSCRIPTION COST?**

16 A. DEC's proposed shared solar program includes an initial subscription charge of
17 \$100 per kW DC of shared solar capacity. So, for example, if a customer wanted
18 to subscribe to 5 kW DC of a shared solar program, they would need to pay \$500
19 up front to participate in the program. Providing an option for participating
20 customers to pay this subscription cost over time is one way to increase access to

¹¹ Colorado HB 10-1342, *available at*
http://www.leg.state.co.us/clics/clics2010a/csl.nsf/fsbillcont/490C49EE6BEA3295872576A80026BC4B?Open&file=1342_01.pdf.

1 the program. For example, Tucson Electric Power in Arizona allows customers to
2 participate in its Bright Tucson Community Solar Program by purchasing
3 subscriptions on their monthly bills with no upfront cost at a price that is fixed for
4 twenty years, with each “block” replacing the cost of an equivalent amount of
5 traditional power.¹² An alternative to this approach would be to waive some or all
6 of the initial subscription charge for customers who want to participate but cannot
7 afford the upfront cost of joining the program due to income level. As another
8 alternative, DEC could provide a higher credit for kWhs produced for customers
9 who meet pre-established requirements for lower income participants.

10 **Q. DO YOU HAVE ANY RECOMMENDATIONS FOR NEW OR**
11 **ADDITIONAL COMPONENTS TO DEC’S DER PROGRAM GOING**
12 **FORWARD?**

13 A. Yes, DEC should consider additional opportunities to increase access to the DER
14 programs moving forward. For example, DEC should consider offering an on-bill
15 financing program for on-site generation to allow customers to invest in solar over
16 time on their utility bills as they save. DEC should also explore ways to pair its
17 existing energy efficiency programs with solar incentives to maximize bill savings
18 for all potential participants, including those with lower incomes.

19 **Q. WHERE ELSE HAVE ON-BILL FINANCING PROGRAMS BEEN**
20 **IMPLEMENTED?**

¹² Tucson Electric Power, Bright Tucson Community Solar (2015),
<https://www.tep.com/renewable/home/bright/#tab2>

1 A. New York has an on-bill financing program for customers who install solar
2 through a participating contractor. Customers can access loans at low interest
3 rates that are repaid on their monthly utility bills. Another example is the City of
4 Fort Collins, Colorado, which through its municipal utility offers low interest
5 loans through on bill financing for participating customers' solar and energy
6 efficiency investments.¹³ Monthly payments for these programs typically may
7 not exceed the estimated energy cost savings from the upgrades, to ensure that bill
8 savings cover the loan amount and that customers' savings over time exceed the
9 costs to participate. South Carolina already allows for on-bill financing for
10 energy efficiency and conservation measures. The DER programs provide an
11 opportunity to consider implementing an additional on-bill financing program for
12 distributed generation resources.

13 **Q. ARE THERE ANY MODELS FROM OTHER STATES OF COMBINING**
14 **DISTRIBUTED GENERATION AND ENERGY EFFICIENCY**
15 **PROGRAMS?**

16 A. One example is GRID Alternatives in California. GRID Alternatives is
17 responsible for implementing the CSI low-income program and helps qualified
18 participants enroll in energy efficiency programs prior to installing solar, which
19 helps maximize electricity savings for low-income customers. Energy efficiency
20 programs available to the participants include California's Energy Savings

¹³ City of Fort Collins, Home Efficiency Loan Program,
<http://www.fcgov.com/utilities/residential/conserve/financing/>.

1 Assistance Program and the national Low Income Home Energy Assistance
2 Program (LIHEAP).¹⁴
3

4 ***Program Modification Procedures***

5 **Q. PLEASE BRIEFLY DESCRIBE DEC’S PROPOSAL FOR MODIFYING**
6 **THE DER PROGRAM.**

7 A. In its application, DEC seeks authority to modify its DER programs without
8 further Commission approval. DEC proposes to notify the Commission and the
9 Office of Regulatory Staff (“ORS”) within 15 days of any change to an existing
10 program or introduction of a new initiative.¹⁵

11 **Q. DO YOU HAVE ANY CONCERNS WITH THIS APPROACH?**

12 A. Yes. If DEC’s request is granted, then program modifications, termination of a
13 program, and any new or additional DER incentive offerings could be made
14 without any prior review, comment, or approval. DEC’s proposal would deprive
15 the Commission, ORS, intervenors, stakeholders, DER program participants, or
16 potential participants of notice and the opportunity comment before changes,
17 including significant changes, are made to the DER programs.

18 **Q. DO YOU HAVE ANY ADDITIONAL CONCERNS WITH THIS**
19 **APPROACH?**

¹⁴ GRID Alternatives, Energy Efficiency, <http://www.gridalternatives.org/learn/clients/energy-efficiency>.

¹⁵ Verified Application of Duke Energy Carolinas, LLC to Establish a Distributed Energy Resource Program, 17 (Feb. 9, 2015), PSCSC Docket No. 2015-55-E.

1 Yes. Act 236, at Sections 58-39-130(3)–(4), says that the “Office of Regulatory
2 Staff, an electrical utility, or any other interested party may file a *petition for*
3 *amendment* of a distributed energy resource program at any time” and “[t]he
4 commission may hold a hearing on such petition if it determines that the extent of
5 the proposed changes warrant a hearing.” (Emphasis added.) DEC’s proposal
6 dramatically departs from this modification procedure.

7 The Act contemplates a more thorough process for the Commission to
8 review and approve changes to the DER programs. There should also be an
9 opportunity for ORS, intervenors, stakeholders, program participants and
10 potential participants to have adequate notice and an ability to comment on
11 significant program modifications before those changes are made.

12 **Q. WHAT WOULD YOU RECOMMEND INSTEAD OF DEC’S PROPOSAL?**

13 A. CCL and SACE request that the Commission require more than DEC’s 15-day
14 notice proposal. Notification and an opportunity to comment thirty or sixty days
15 prior to the changes taking effect would provide a more adequate amount of
16 process for program changes. At a minimum, Commission approval should be
17 required for major program modifications such as discontinuing an incentive,
18 significantly altering an incentive level, or introducing a new incentive program.
19 To avoid having to approve minor changes to the program, the Commission could
20 consider requiring that above a certain significance threshold, modifications
21 would be subject to greater review and scrutiny by the Commission, ORS,
22 interested intervenors, and stakeholders.

1 **Q. DO YOU HAVE ANY SUGGESTIONS FOR WHAT THRESHOLDS MAY**
2 **BE APPROPRIATE?**

3 A. Yes. In North Carolina, DEC's demand-side management and energy efficiency
4 programs have an established set of criteria for when notice and review will take
5 place for certain program modifications. While the programs are somewhat
6 different, that example provides guidance for establishing a more thorough notice
7 and review procedure than what DEC has proposed for its DER programs. For
8 example, if the following thresholds were used to trigger Commission review and
9 approval along with an opportunity for notice and comment by ORS, intervenors,
10 and other stakeholders, this would strike a balance between making sure major
11 program changes are vetted while also allowing DEC to make minor changes to
12 the program without excessive delay:

- 13 • Introduction of a new incentive program or termination of an existing
14 program
- 15 • Utility scale program: a request for proposal revision that causes
16 projected utility-scale incremental costs to rise by more than 20% in
17 any year
- 18 • Customer scale program: an incentive level revision that changes
19 incentive offered to customers by more than 20% in any year
- 20 • Shared Solar program: if the net present value participant cost or
21 benefit changes by more than 20%

1 These thresholds would not apply if a program change was made in accordance
2 with a PSC-approved market-based step-down mechanism, explained in greater
3 detail below.

4
5 *Step-Down Incentive Approach*

6 **Q. HOW DOES DEC PROPOSE TO REVISE ITS INCENTIVE LEVELS**
7 **OVER TIME?**

8 A. In its application, DEC has requested “the ability to modify existing DER
9 programs as appropriate without specific Commission approval.”¹⁶ DEC
10 witnesses Emily Felt and Jose Merino further provide that DEC plans to
11 periodically evaluate incentive levels and adjust as needed to reflect market
12 conditions; however, no schedule is provided for the evaluations, making changes
13 unpredictable.¹⁷ Additionally, under this proposal, transparency would be limited
14 or completely lacking in terms of analytical support for program modifications.

15 **Q. ARE THERE OTHER WAYS OF REVISING INCENTIVE PROGRAMS?**

16 A. Yes. Step-down mechanisms and competitive bid processes are two approaches
17 that utilities in the United States have used to revise incentive programs.¹⁸ Both
18 approaches offer greater transparency than DEC’s proposed approach to revising

¹⁶ Verified Application of Duke Energy Carolinas, LLC to Establish a Distributed Energy Resource Program, 17 (Feb. 9, 2015), PSCSC Docket No. 2015-55-E.

¹⁷ Direct Testimony of Emily O. Felt at 11; Direct Testimony of Jose I. Merino at 15.

¹⁸ See Section 6 in Bird, Reger, and Heeter, Distributed Solar Incentive Programs: Recent Experience and Best Practices for Design and Implementation, National Renewable Energy Laboratory NREL/TP-6A20-56308 (December 2012).

1 incentives, and step-down mechanisms offer greater predictability for market
2 participants as well.

3 **Q. CAN YOU FURTHER DESCRIBE A STEP-DOWN INCENTIVE**
4 **APPROACH?**

5 A. Step-down incentive mechanisms set a schedule whereby incentive levels will
6 decline as installed capacity targets, budget thresholds, or other benchmarks are
7 met. The forward-looking schedule allows industry and prospective DER
8 adopters to plan for changing incentives, and helps stabilize the market against
9 boom and bust cycles. Adjusting incentives downward over time also reduces
10 program costs to ratepayers.

11 **Q. WHERE HAS THIS APPROACH BEEN USED?**

12 A. The step-down approach has been used by utilities in California, Colorado, New
13 Mexico, Arizona, Ohio, New York, and Texas.

14 **Q. WHY SHOULD DEC CONSIDER SUCH AN APPROACH FOR SOUTH**
15 **CAROLINA?**

16 A. A step-down mechanism provides greater transparency and predictability to the
17 market as compared with DEC's proposed approach to revising incentives. This
18 will strengthen the stability of the nascent South Carolina market and will help
19 DEC reach the goals set out in Act 236 in the most cost effective manner.

20 A step-down mechanism also provides an alternative to DEC's current
21 proposal to limit rebate offerings based on calendar year. DEC's application
22 states that the rebate incentive will be offered each year until 8 MW of

1 participation capacity is reached, and then no more rebate applications will be
2 accepted until the following calendar year. A step-down mechanism based on
3 capacity targets could provide that the rebate incentive is lowered—but not
4 completely halted—once an established capacity level is reached. A step-down
5 approach would not need to depend on the calendar year.

6 **Q. WHAT OTHER RECOMMENDATIONS DO YOU HAVE REGARDING**
7 **THE STEP-DOWN APPROACH?**

8 A. I recommend that DEC establish a web-based tracking mechanism that
9 continually updates program capacity levels, or other applicable benchmarks, so
10 that market participants have access to updated information on current and
11 upcoming incentive levels under the step-down mechanism.

12
13 *Renewable Energy Credits*

14 **Q. WHAT IS A RENEWABLE ENERGY CREDIT (“REC”)?**

15 A. Renewable energy credits represent a claim on the renewable attributes of a
16 generation source. RECs can be unbundled from the actual electricity they are
17 originally associated with, and can be exchanged as a separate product in REC
18 markets. When an organization that owns a REC wants to make a claim on the
19 renewable attributes, the organization must retire the REC, at which point it
20 cannot be sold again.

21 **Q. WHAT HAS DEC PROPOSED TO DO WITH RECS UNDER ITS DER**
22 **APPLICATION?**

1 A. DEC has not addressed RECs in its application or direct testimony other than to
2 state that it intends to retain all RECs.¹⁹

3 **Q. HOW SHOULD DEC TREAT RECS?**

4 A. RECs that are created by DER programs paid for by South Carolina customers
5 should benefit South Carolina customers. Thus, DEC should commit to using
6 RECs in a way that will maximize financial benefits, and should reserve those
7 benefits exclusively for South Carolina ratepayers.

8 **Q. DO YOU HAVE ANY OTHER RECOMMENDATIONS REGARDING**
9 **THE RECS?**

10 A. No.

11 **Q. DOES THAT CONCLUDE YOUR DIRECT TESTIMONY?**

12 A. Yes, it does.

¹⁹ Verified Application of Duke Energy Carolinas, LLC to Establish a Distributed Energy Resource Program, Exhibits A and B (Feb. 9, 2015), PSCSC Docket No. 2015-55-E.

T. Hamilton Davis IV
Charleston, South Carolina
hamiltond@sccl.org

I have been working for the SC Coastal Conservation League (CCL) since 2006 and currently serve as their Energy & Climate Director. The CCL Energy & Climate Program promotes the implementation of comprehensive local, state, and federal energy policies related to renewable energy, energy efficiency, and climate change

EMPLOYMENT EXPERIENCE

- | | |
|--|-----------------------|
| SC Coastal Conservation League | 2006 – Present |
| <ul style="list-style-type: none">• Energy & Climate Director• State lobbyist• Management of two employees and all CCL energy issues related to policy, regulation, and private sector collaboration• Presentations at and organization of multiple state and regional energy conferences; testimony before the SC Public Service Commission and Legislature• Published writings in the Southeastern Environmental Law Journal and an array of media resources across South Carolina; grant writing responsibilities | Charleston, SC |
| Robert August Surf Shop | 2005 -2006 |
| <ul style="list-style-type: none">• Surf Instructor | Tamarindo, Costa Rica |
| Lee, Eadon, Isgett, Popwell, and Reardon, P.A. | 2003 - 2004 |
| <ul style="list-style-type: none">• Law Clerk | Columbia, SC |

BOARDS & COMMITTEES

- SC Solar Business Alliance Board; Energy Advisory Council for the SC Public Utility Review Committee; SC Energy Office Advisory Committee; SC Offshore Wind Regulatory Task Force; SC Offshore Oil & Gas Legislative Study Committee; SC Offshore Wind Legislative Study Committee; SC Shoreline Change Advisory Committee; Southeastern Coastal Wind Coalition

EDUCATION

- | | |
|--|--------------|
| University of South Carolina School of Law | 2002 - 2005 |
| <ul style="list-style-type: none">• Juris Doctorate• Phi Delta Phi | Columbia, SC |
| Clemson University | 1996 - 2000 |
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CERTIFICATE OF SERVICE

I hereby certify that the parties listed below have been served via first class U.S. Mail with a copy of the Direct Testimony of Hamilton Davis on Behalf of South Carolina Coastal Conservation League and Southern Alliance for Clean Energy.

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This 28th day of April, 2015.

s/Jessica Foster